(i) SEQ ID Nos: 1 to 10;

(ii) a nucleic acid sequence which encodes a polypeptide encoded by any one of SEQ ID Nos: 1 to 10;

(iii) a nucleic acid sequence comprising at least 38 consecutive nucleotides from any one of the nucleic acid sequences of (i) and (ii);

(iv) a nucleic acid sequence which encodes a polypeptide which is at least 75% identical in amino acid sequence to the polypeptide encoded by any one of SEQ ID Nos: 1 to 10;

(v) a nucleic acid sequence which encodes a polypeptide whose sequence is set forth in any one of SEQ ID Nos: 11 to 16;

(vi) a nucleic acid sequence which encodes an immunogenic fragment comprising at least 12 consecutive amino acids from any one of SEQ ID Nos: 11 to 16; and

(vii) a nucleic acid sequence which encodes a polypeptide as defined in (i) to (v) or an immunogenic fragment as defined in (vi) which has been modified without loss of immunogenicity, wherein said modified polypeptide or fragment is at least 75% identical in amino acid sequence to the corresponding polypeptide of (i) to (v) or the corresponding fragment of (vi);

wherein each first nucleic acid is capable of being expressed.

9. (Amended) A vaccine comprising a vaccine vector and at least one first nucleic acid encoding a fusion protein, wherein the fusion protein comprises:

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(a) a first polypeptide selected from any of:

(i) a polypeptide encoded by any one of SEQ ID Nos: 1 to 10;

(ii) a polypeptide encoded by a nucleic acid sequence comprising at least 38 consecutive nucleotides from any one of SEQ ID Nos: 1 to 10;

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(iii) a polypeptide which is at least 75% identical in amino acid sequence to the polypeptide encoded by any one of SEQ ID Nos: 1 to 10;

(iv) a polypeptide whose sequence is set forth in any one of SEQ ID Nos: 11 to 16;

(v) an immunogenic fragment comprising at least 12 consecutive amino acids from any one of SEQ ID Nos: 11 to 16; and

(vi) a polypeptide as defined in (i) to (iv) or an immunogenic fragment as defined in (v) which has been modified without loss of immunogenicity, wherein said modified polypeptide or fragment is at least 75% identical in amino acid sequence to the corresponding polypeptide of (i) to (iv) or the corresponding fragment of (v); and

(b) a second polypeptide;

wherein each first nucleic acid is capable of being expressed.

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12. (Amended) The vaccine of claim 8 wherein each first nucleic acid is operatively linked to one or more expression control sequences.

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13. (Amended) A vaccine according to claim 8 wherein each first nucleic acid is expressed as a polypeptide,

and wherein the vaccine comprises a second nucleic acid encoding an additional polypeptide which enhances the immune response to the polypeptide expressed by the first nucleic acid.

14. (Amended) The vaccine of claim 13 wherein the second nucleic acid encodes an additional *Chlamydia* polypeptide.

15. (Amended) A pharmaceutical composition comprising a nucleic acid according to claim 1 and a pharmaceutically acceptable carrier.

16. (Amended) A pharmaceutical composition comprising a vaccine according to claim 8 and a pharmaceutically acceptable carrier.

20. (Amended) A polypeptide encoded by a nucleic acid sequence according to claim 2.

25. (Amended) A method for producing a polypeptide of claim 20, comprising the step of culturing a unicellular host transformed with a nucleic acid encoding a polypeptide of claim 20.

26. (Amended) An antibody against the polypeptide of claim 20.

27. (Amended) A vaccine comprising at least one first polypeptide selected from any of:

(i) a polypeptide encoded by any one of SEQ ID Nos: 1 to 10;

(ii) a polypeptide encoded by a nucleic acid sequence comprising at least 38 consecutive nucleotides from any one of SEQ ID Nos: 1 to 10;

(iii) a polypeptide which is at least 75% identical in amino acid sequence to the polypeptide encoded by any one of SEQ ID Nos: 1 to 10;

(iv) a polypeptide whose sequence is set forth in any one of SEQ ID Nos: 11 to 16;

(v) an immunogenic fragment comprising at least 12 consecutive amino acids from any one of SEQ ID Nos: 11 to 16; and

(vi) a polypeptide as defined in (i) to (iv) or an immunogenic fragment as defined in (v) which has been modified without loss of immunogenicity, wherein said modified polypeptide or fragment is at least 75% identical in amino acid sequence to the corresponding polypeptide of (i) to (iv) or the corresponding fragment of (v).

28. (Amended) A vaccine comprising at least one fusion protein, wherein the fusion protein comprises:

(a) a first polypeptide selected from any of:

(i) a polypeptide encoded by SEQ ID No: 1;

(ii) a polypeptide encoded by a nucleic acid sequence comprising at least 38 consecutive nucleotides from SEQ ID No: 1;

(iii) a polypeptide which is at least 75% identical in amino acid sequence to the polypeptide encoded by SEQ ID No: 1;

(iv) a polypeptide whose sequence is set forth in SEQ ID No: 2;

(v) an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No:2; and

(vi) a polypeptide as defined in (i) to (iv) or an immunogenic fragment as defined in (v) which has been modified without loss of immunogenicity, wherein said modified polypeptide or fragment is at least 75% identical in amino acid sequence to the corresponding polypeptide of (i) to (iv) or the corresponding fragment of (v); and

(b) a second polypeptide.

31. (Amended) A vaccine comprising at least one first polypeptide according to claim 20 and an additional polypeptide which enhances the immune response to the first polypeptide.

32. (Amended) The vaccine of claim 31 wherein the additional polypeptide comprises a *Chlamydia* polypeptide.

33. (Amended) A pharmaceutical composition comprising a polypeptide according to claim 20 and a pharmaceutically acceptable carrier.

34. (Amended) A pharmaceutical composition comprising a vaccine according to claim 27 and a pharmaceutically acceptable carrier.

36. (Amended) A method for preventing or treating *Chlamydia* infection comprising administering to a patient an effective amount of:

(a) a nucleic acid according to claim 2;

(b) a vaccine comprising a vaccine vector and at least one first nucleic acid according to claim 2;

(c) a pharmaceutical composition comprising a nucleic acid according to claim 2 and a pharmaceutically acceptable carrier;

(d) a polypeptide encoded by a nucleic acid according to claim 2; or

(e) an antibody against a polypeptide encoded by a nucleic acid according to claim 2.

37. (Amended) A method of detecting *Chlamydia* infection comprising the step of contacting a body fluid of a mammal to be tested, with a component selected from any one of:

(a) a nucleic acid according to claim 2;

(b) a polypeptide encoded by a nucleic acid according to claim 2; and

(c) an antibody against a polypeptide encoded by a nucleic acid according to claim 2.

38. (Amended) A diagnostic kit comprising instructions for use and a component selected from any one of:

(a) a nucleic acid according to claim 2;

(b) a polypeptide encoded by a nucleic acid according to claim 2; and

(c) an antibody against a polypeptide encoded by a nucleic acid according to claim 2.

39. (Amended) A method for identifying a polypeptide of claim 20 which induces an immune response effective to prevent or lessen the severity of *Chlamydia* infection in a mammal previously immunized with polypeptide, comprising the steps of:

(a) immunizing a mouse with the polypeptide of claim 20; and